

**AMENDMENTS TO THE CLAIMS**

1-4. (canceled)

15. (new) A process for working up a bottom stream comprising one or more high boilers and ionic liquid from an extractive rectification in which the ionic liquid is used as entrainer, which comprises feeding the bottom stream to an evaporation stage which is operated at a pressure of less than 500 mbar and in which the major part of the high boiler present is separated off in vapor form from the ionic liquid so that the high boiler content of the ionic liquid is reduced to concentrations of less than 5% by weight and subsequently feeding the worked-up ionic liquid to a stripper which is supplied with inert gas or superheated steam and is operated at ambient pressure.

16. (new) A process for working up a bottom stream comprising one or more high boilers and ionic liquid from an extractive rectification in which the ionic liquid is used as entrainer, which comprises feeding the bottom stream to an evaporation stage which is operated at a pressure of less than 500 mbar and in which the major part of the high boiler present is separated off in vapor form from the ionic liquid so that the high boiler content of the ionic liquid is reduced to concentrations of less than 5% by weight and subsequently feeding the worked-up ionic liquid to a stripper which is supplied with inert gas or superheated steam and is operated at a pressure of less than 900 mbar, particularly preferably less than 500 mbar.

17. (new) A process for working up a bottom stream comprising one or more high boilers and ionic liquid from an extractive rectification in which the ionic liquid is used as entrainer, which comprises feeding the bottom stream to a stripper which is supplied with superheated steam comprising the low boiler and is operated at ambient pressure or at a pressure of less than 900 mbar

18. (new) The process according to claim 15, wherein air is used as inert gas for stripping.

19. (new) The process according to claim 18, wherein dried inert gas is used for stripping.
20. (new) The process according to claim 15, wherein a dephlegmator is used at the top of the stripper to separate out high boilers still present.
21. (new) The process according to claim 15, wherein the evaporation in the evaporator downstream of the extractive rectification column is carried out by depressurization vaporization without additional introduction of heat.
22. (new) The process according to claim 15, wherein high boilers are discharged in vapor form via a side offtake on the extractive rectification column.
23. (new) The process according to claim 22, wherein the side offtake used for separating off the high boilers is positioned in the stripping section of the extractive column close to the bottom, particularly preferably at one of the three bottom-most theoretical plates, very particularly preferably at the bottom-most theoretical plate (bottom).
24. (new) The process according to claim 15, wherein the ionic liquid obtained by means of the work-up is recirculated to the extractive rectification column.
25. (new) The process according to claim 15, wherein, when an evaporator is used, a liquid ring pump is used for compressing the vapors to ambient pressure, with the liquid ring pump being operated using ionic liquid as ring liquid.
26. (new) The use of the process according to claim 15 for separating mixtures comprising polar and nonpolar materials which form azeotropes or are close-boiling.